In the Claims

This listing of claims will replace all prior versions, and listings, of claims.

Listing of Claims

1-38. (Canceled)

39. (Currently Amended) An electret composite, comprising:

a porous substrate; and

an electret coated on the substrate along the porous profile thereof, the electret having a first polymer copolymerizing from monomers having vinylidene fluoride (VdF) as a first monomer, hexafluoropropylene (HFP), chlorotrifluoro ethylene (CTFE), tetrafluoro ethylene (TFE), or combinations thereof as a second monomer, and a third monomer ~~comprising~~ including ~~cyclohexyl vinyl ether, 4-hydroxybutyl vinyl ether, ethyl vinyl ether, methyl methacrylate, butyl acrylate, 4-hydroxyl ethyl methacrylamide,~~ glyceryl methacrylamide, acrolein, ~~butyl vinyl ether, propionic vinyl ether, α,α-dimethylpropionic vinyl ether,~~ or combinations thereof.

40. (Original) The composite as claimed in claim 39, wherein the substrate comprises a nonwoven or woven fabric of polyethylene terephthalate, polyethylene, polypropylene, polytetrafluoroethylene, polystyrene, or polyvinyl chloride.

41. (Original) The composite as claimed in claim 39, wherein the content of VdF in the first polymer is between 10 mole% and 80 mole%.

42. (Original) The composite as claimed in claim 39, wherein the content of HFP in the first polymer is approximately 30 mole% or less.

43. (Original) The composite as claimed in claim 39, wherein the content of CTFE in the first polymer is approximately 30 mole% or less.

44. (Original) The composite as claimed in claim 39, wherein the content of TFE in the first polymer is approximately 40 mole% or less.

45. (Cancelled)

46. (Previously presented) The composite as claimed in claim 39, wherein the content of the third monomer in the first polymer is approximately 30 mole% or less.

47. (Original) The composite as claimed in claim 39, wherein the content of fluorine element in the first polymer is between 60 and 76 wt%.

48. (Original) The composite as claimed in claim 39, wherein the electret further comprises a second polymer mixed with the first polymer, the second polymer comprising polymethacrylate, polyvinyl acetate, polycarbonate, polyurethane, polyester, polyimide, poly(butylene terephthalate), or polystyrene.

49. (Previously Presented) The composite as claimed in claim 48, wherein the content of second polymer in the electret is approximately 60 wt% or less.

50. (Original) The composite as claimed in claim 39, wherein the substrate is coated by dissolving the electret in acetone, methyl ethyl ketone, methyl isobutyl ketone, 1-methyl-2-pyrrolidone, dimethyl sulfoxide, dimethylformamide, or combinations thereof to form a solution, immersing the substrate in the solution, taking the substrate from the solution, and evaporating the solution therefrom.

51. (Original) The composite as claimed in claim 39, wherein a initial surface potential of the electret is between 2820 and 2950V when polarized by corona discharge under potential difference approximately 18KV.

52. (Original) The composite as claimed in claim 51, wherein a surface potential of the electret is 50 to 55% of the initial surface potential at room temperature for approximately 10 days from polarization.

53. (Previously presented) The composite as claimed in claim 39, wherein the electret is coated on the inner walls of the pores of the porous substrate.